

Translation

## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>DC 028-P-WO</b>	FOR FURTHER ACTION	See Form PCT IPEA 416
International application No. <b>PCT/CH2004/000148</b>	International filing date (day month year) <b>15.03.2004</b>	Priority date (day month year) <b>10.04.2003</b>
International Patent Classification (IPC) or national classification and IPC		
Applicant <b>BÜHLER DRUCKGUSS AG</b>		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>8</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of <u>2</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and or drawings which have been amended and are the basis for this report and or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> sent to the International Bureau only a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA EP	Authorized officer
Facsimile No.	Telephone No.

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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CH2004/00148

Box No. 1 Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:

- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report:*

☐ the international application as originally filed furnished

☒ the description:

pages 1-7 \_\_\_\_\_ as originally filed furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the claims:

nos. \_\_\_\_\_ as originally filed furnished

nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19

nos.\* 1-14 \_\_\_\_\_ received by this Authority on 04.10.2004 with the letter of 01.04.2004

nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the drawings:

sheets 1/5-5/5 \_\_\_\_\_ as originally filed furnished

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, nos. \_\_\_\_\_

☐ the drawings, sheets figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CH2004/000148

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-14	YES
	Claims		NO
Inventive step (IS)	Claims	1-14	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO

### 2. Citations and explanations (Rule 70.7)

Reference is made to the following document:

D1: PATENT ABSTRACTS OF JAPAN, Vol. 2000, No. 26,  
1 July 2002 -&JP 2001 239357 A (AISIN SEIKI  
CO LTD), 4 September 2001 (2001-09-04)

1.)

Novelty:

Document D1 is considered the prior art closest to the subject matter of claim 1 and discloses a holding furnace for molten metal, more particularly for light molten metal, comprising a dosing chamber that has a sealable discharge aperture which opens out into a feed tube, via which the molten metal can be supplied in a dosed manner to the place of use and it being possible to actively seal the discharge aperture by means of a stopper rod.

The subject matter of independent claim 1 differs from the prior art in that the dosing chamber (8) with the delivery pipe (21) is rotatably and

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability:  
citations and explanations supporting such statement

tiltably mounted in the holding furnace (1).

Novelty pursuant to PCT Article 33(2) is thus established.

2.)

Inventive step:

The features which distinguish the application from the available prior art have the **effect** of making it possible to better adapt to the geometric ratios of the casting chamber to be filled and that by means of a small tilting movement it is possible to decouple the dosing unit from the casting chamber, which is subject to heavy vibration.

It is not possible for the applicant to derive the claimed device from the prior art and therefore an inventive step (PCT Article 33(3)) can be acknowledged in respect of claim 1.

3.)

Dependent claims:

Claims 2-13 and 14\* are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

\* see Box VIII a.)

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

ECT/CH2004/000148

Box No. A

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

4.1

Industrial applicability:

Since the method and the device can be used to handle melts in the foundry industry, the invention is industrially applicable.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CH2004/000144

## Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

a.)

Contrary to PCT Rule 5.1(a)(ii), the description does not cite document D1 or indicate the relevant prior art disclosed therein.

b.)

Pursuant to PCT Rule 11.13(m), the same feature must be denoted by the same reference sign throughout the application. This requirement is not satisfied by the use of reference sign (8) (see figures 1 and 2).

c.)

Contrary to PCT Rule 5.1(a)(iii), the description is inconsistent with the claims.

## Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The application does not meet the requirements of PCT Article 6 because claims 1-14 are unclear.

a.)

Claim 14 is not clear. As currently worded, claim 14 is an independent claim. In the light of the description, however, it can be seen that it actually concerns a holding furnace according to claims 1 to 13, with a dosing device which is characterised in that the melt conversion is isolated following the join (23) by means of a ceramic sleeve (41) which is inserted into the casting chamber inside a wear protection sleeve (42).

b.)

The use of the definite article leads the reader to assume that the feature has already been mentioned in the preceding claims. This is not, however, the case for the following features and claims, which therefore contravene PCT Article 6; see:

claim 1: **the** delivery pipe (21)

claim 2: **the** gas-tight and...drive

claim 3: **the** scanning electrodes

claim 4: refers, *inter alia*, to claim 1, which mentions neither scanning electrodes nor a bellows

claim 9: **the** concentric arrangement of the rotary

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International application No.

PCT/CH2004/000112

Box No. VIII Certain observations on the international application

a) III.

c.)

The features in claims 5, 6, 7, 11 and 12 relate to a method instead of describing clear restrictions for the device. The requirements of PCT Article 6 are therefore not satisfied.

d.)

Known features should be indicated in the preamble and new features in the characterising part. This is not the case in claim 1, which therefore contravenes PCT Article 6.